

CLAIMS

What is claimed is:

1. A microscope slide stainer, comprising:
a moving platform adapted to support a plurality of microscope slides
5 bearing biologic samples;
a plurality of heating elements, each heating at least one slide, the heating
elements heating the slides to different temperatures;
electronic circuitry that supplies variable amounts of electrical power to
said heating elements, said electronic circuitry being mounted on the moving
10 platform; and
a user interface in communication with said electronic circuitry and
through which desired temperatures for microscope slides are specified, said user
interface being mounted off of the moving platform and communicating data to
said electronic circuitry on the moving platform to cause said electronic circuitry
15 on the moving platform to supply electrical power to said heating elements to heat
said heating elements to said desired temperatures.
2. A microscope slide stainer as claimed in claim 1, wherein said electronic circuitry
on the moving platform and the user interface, not mounted on said moving
platform, communicate electrically via a group of conductors.
- 20 3. A microscope slide stainer as claimed in claim 2, wherein the number of
conductors in the group of conductors is fewer than the number of heating
elements.
4. A microscope slide stainer as claimed in claim 1, wherein said electronic circuitry
comprises a shift register, which receives control data from the user interface.

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5. A microscope slide stainer as claimed in claim 1, further comprising a temperature sensor for providing temperature feedback information .
6. A microscope slide stainer as claimed in claim 1 wherein each heating element heats a single slide.
- 5 7. A microscope slide stainer as claimed in claim 1 wherein each heating element comprises a flat slide support surface.
8. A microscope slide stainer, comprising:
 - a plurality of microscope slides bearing biologic samples, positioned on a moving platform;
 - 10 a plurality of heating elements on the moving platform, each element heating at least one slide, and at least one being heated to a temperature distinct from the temperatures of other heating elements;
 - electronic circuitry that regulates electrical power to said heating elements, said electronic circuitry being mounted on the moving platform;
 - 15 a user interface through which desired temperatures for microscope slides is specified, said user interface being mounted off of the moving platform and said user interface comprising electronic circuitry which communicates data to the electronic circuitry on the moving platform, causing said electronic circuitry on the moving platform to supply electrical power to said heating elements to attain
 - 20 said desired temperature ; and,
 - a group of conductors for providing an electrical connection between said electronic circuitry on the moving platform and the user interface, the number of conductors in said group of conductors being less than the number of heater elements.

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9. A microscope slide stainer as claimed in claim 8, further comprising a temperature sensing means for providing temperature feedback data.
10. An automated device for preparation or incubation of biologic samples, comprising:
 - 5 a moving platform adapted to support a plurality of biologic samples;
a plurality of heaters positioned on the moving platform so as to provide heat to one or more samples;
a computer that specifies the desired temperatures for the heaters, said computer being mounted off of the moving platform;
 - 10 independent heating control capable of heating the heaters to different temperatures, said heating control comprising:
electronic circuitry mounted on the moving platform supplying electrical power to at least one heater; and
a data communication link between the computer and said electronic
15 circuitry mounted on the moving platform, through which said electronic circuitry receives data from the computer to cause said electronic circuitry to provide an appropriate amount of electrical power to each of said heaters to heat the heaters to the computer-specified temperatures.
11. An automated device, as claimed in claim 10, wherein the biologic samples are
20 mounted on a microscope glass slide.
12. An automated device, as claimed in claim 10, further comprising a temperature sensor that provides temperature feedback information.
13. A microscope slide stainer, comprising:
 - 25 a moving platform adapted to support a plurality of microscope slides
bearing biological samples;

a plurality of heating means, each for heating at least one slide, each of the heating means having the capability of heating to different temperatures;

electronic circuitry means for regulating electric power to the heating means, said electronic circuitry means being mounted on the moving platform;

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and

user interface means in communication with the electronic circuitry means for specifying a desired temperature for each microscope slide, said user interface means being mounted off of the moving platform and communicating data to the electronic circuitry on the moving platform to regulate the electrical power to the heating means.

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